

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-3. (Canceled)

4. (Currently Amended) The method of claim 6, wherein the control code comprises part of an electronic program guide (EPG) or electronic content guide (ECG).

5. (Canceled)

6. (Currently Amended) A method of configuring and using a universal programmable remote control device, the method comprising:

enabling a user to specify to a server on the internet at least one apparatus to be controlled by the universal programmable remote control device which universal programmable remote control device has a touch screen graphical user interface (GUI), the server on the internet including a database of code sets, and wherein each apparatus to be controlled has having a corresponding dedicated remote control device with a control panel;

enabling the server on the internet to identify a control code corresponding to each specified apparatus and to provide the identified control code as data in [[a]] an extensible mark-up language (XML) format;

providing each identified control code over the internet to a home network through which the programmable universal remote control device can access the provided extensible mark-up language format control code, the extensible mark-up language format control code for each specified apparatus including (1) a code set representative of commands to control a state of the specified apparatus and (2) code to control the touch screen GUI of the universal programmable remote control device to display a graphical representation of the control panel of the dedicated remote control device of the specified apparatus, the graphical representation including an image of icons and soft keys corresponding to control panel keys of the dedicated remote control device of the specified apparatus;

the control code not being usable by the specified apparatus until the control code is converted via an extensible stylesheet language (XSL) application into commands for

installation and local processing on the universal programmable remote control device and transmitted from the universal programmable remote control device to the specified apparatus by an infra-red (IR) or radio-frequency (RF) transmission independent of the internet, wherein the specified apparatus is not preconfigured to deliver or cause delivery of its respective control code to the a control device;

enabling the universal programmable remote control device to convert the installed and locally processed control code into (1) ~~the~~ associated commands to control the specified apparatus and (2) the soft keys and the graphical representation of the icons on the touch screen GUI of the universal programmable remote control device such that the touch screen GUI depicts the control panel of the dedicated remote control device corresponding to the specified apparatus; and

using the soft keys of the displayed control panel on the touch screen GUI to enable the universal programmable remote control device to send commands to the specified apparatus via the IR or RF transmission.

7-13. (Canceled)

14. (Currently Amended) A universal programmable remote control device configured for receiving a control code from a source over a bidirectional data network, the control code comprising data in ~~[[a]]~~ an extensible mark-up language (XML) format, the control code representative of (1) commands for a selected apparatus and (2) soft key positions and icons for a graphical representation image of control keys of a dedicated remote control device corresponding to the selected apparatus, the remote control device comprising:

a graphical user interface (GUI) display panel on which the soft keys and icons are rendered;

the universal programmable remote control device being configured to use the control code representative of the soft key positions and icons for the control key of the dedicated remote control device corresponding to the selected apparatus to render a graphical representation image on the GUI display panel depicting the control keys of the dedicated remote control device for the selected apparatus in which the keys and icons for selecting the commands for the selected apparatus are in the same location as the corresponding keys and icons of the dedicated remote control device such that when a user switches between the

universal programmable remote control device and the dedicated remote control device, the control keys are in the same position and have the same function as the dedicated remote control device;

the universal programmable remote control device being configured to convert via an extensible stylesheet language (XSL) application the control code from a form that is not usable on the selected apparatus to be controlled into a command for installation and local processing on the universal programmable remote control device that is usable by the selected apparatus to change a state of the selected apparatus; and

a transmitter converting the at least one selected command into an infra-red (IR) or radio-frequency (RF) signal which is transmitted to control the selected apparatus.

15. (Canceled)

16. (Currently Amended) A machine readable memory on which code is stored for controlling consumer electronics (CE) equipment and for being supplied as data in an extensible mark-up language (XML) format, the control code for being converted via an extensible stylesheet language (XSL) application into commands for installation and local processing on a universal programmable remote control device, the installed and locally processed commands (1) representing an infra-red (IR) or radio-frequency (RF) signal for transmission by [[a]] the universal programmable remote control device to the CE equipment and (2) rendering a control key layout as a graphical representation image of icons and soft keys on a graphical user interface (GUI) of the universal programmable remote control device that emulates a key layout of a dedicated remote control device for the CE equipment.

17. (Currently Amended) A method comprising:

enabling each of a plurality of users to specify to a server, over a bidirectional data network, a user specified apparatus for being controlled by a universal programmable remote control device of a user;

enabling the server to identify extensible mark-up language (XML) tags that specify control codes included in data in XML language format, the control codes being representative of (1) control codes for controlling the user specified apparatus and sending (2) instructions for rendering icons and soft buttons on a graphical user interface (GUI) touch screen which

emulate control keys of a dedicated remote control device for the specified apparatus; and enabling the server to communicate over the bidirectional data network with a home network that ~~comprises~~ includes the user's universal programmable remote control device for delivery of the control codes to the universal programmable remote control device, wherein the control codes are not directly usable by the specified apparatus until conversion of the control codes by the home network via an extensible mark-up language (XML) application into commands for being installed and locally processed by the universal programmable remote control device and that can be sent by the universal programmable remote control device to the specified apparatus independent of the bidirectional data network.

18. (Currently Amended) A method, comprising:

providing control codes as data in an extensible mark-up language (XML) mark-up language format to a home network ~~comprising~~ including a universal programmable remote control device, the control codes for being converted via an extensible mark-up language (XML) application into commands for installation and local processing on the universal programmable remote control device, wherein the control codes include a first set of control codes with rendering instructions for rendering a graphical representation image of icons and soft keys on a graphical user interface (GUI) touch screen using an extensible stylesheet language (XSL) style sheet, wherein the graphical representation image on the GUI touch screen emulates a key layout of a dedicated remote control device for a consumer electronics (CE) equipment, and a second set of control codes representing commands suitable for transmission by the universal programmable remote control device over an infra-red (IR) or radio-frequency (RF) network to [[a]] the CE equipment to control the a state of the CE equipment, the control codes being provided from a database over a bidirectional data network to the home network, wherein the CE equipment is not pre-configured to deliver or cause delivery of its respective control ~~code~~ codes to the universal programmable remote control device.

19. (Canceled)

20. (Canceled)

21. (Currently Amended) The ~~method~~ device of claim 14, wherein the bidirectional data network includes the internet, and ~~wherein~~ the source is located on the internet and remote from the selected apparatus and the bidirectional data network.

22. (Currently Amended) The memory for storing a database of claim 31, wherein the bidirectional data network includes the internet, the plurality of home networks each being connected with the internet to receive control codes requested from the database over the internet.

23. (Canceled)

24. (Currently Amended) The method of claim 17, wherein the bidirectional data network includes the internet, the user specifying the apparatus to be controlled over the internet to the server, which server is remote from and not a part of the home network or the specified apparatus, and the control ~~code is~~ codes are sent via the internet to the home network to the ~~controlled~~ universal programmable remote control device.

25. (Currently Amended) The method of claim 18, wherein the database is remote from and not a part of the home network and not a part of the consumer electronics (CE) equipment.

26. (Currently Amended) The method of claim 25, wherein the bidirectional data network includes the internet, the control codes being sent over the internet from the database to the home network.

27-28. (Canceled)

29. (Currently Amended) The method of claim 17, further including:

on a touch screen graphical user interface (GUI) display element, generating a graphical representation depicting the dedicated remote control device for the specified apparatus.

30. (Canceled)

31. (Currently Amended) A memory for storing a database, comprising:

control codes for controlling apparatuses through universal programmable remote control devices, the control codes representative of commands suitable for use by the universal programmable remote control devices to control the apparatuses over an infra-red (IR) or radio-frequency (RF) network and being formatted in a mark-up language, the database being in communication over a bidirectional data network with a plurality home network systems each of which ~~comprises~~ includes at least a universal programmable remote control device, the control codes being deliverable to the universal programmable remote control devices independent of the controlled apparatuses, the control codes being described as data in extensible mark-up language (XML) format with XML tags which define (1) control parameters including one or more of: carrier frequency, duty cycle, protocol type, repetition type, on/off times of ~~the a~~ signal and bit pattern of command codes and (2) at least one of: a type of the controlled apparatus and a brand name of the controlled apparatus;

wherein the control codes further include:

a definition of a graphical user interface (GUI) display panel and soft key locations which when rendered on the GUI display panel display icons and buttons in the same position and with a common function as control keys of a dedicated remote control device for ~~the a~~ a corresponding controlled apparatus, the control codes still further for being converted via an extensible stylesheet language (XSL) application into commands for installation and local processing on the universal programmable remote control device.

32. (Currently Amended) The method of claim 17, wherein rendering the icons and soft buttons to emulate the control key keys of the dedicated remote control device for the specified apparatus includes:

rendering ~~the~~ each icon or soft button in ~~the a~~ a same relative location as ~~the a~~ a corresponding control key of the dedicated remote control device for the specified apparatus which performs the same function.

33. (Currently Amended) A universal programmable remote control device for controlling any one or more consumer appliances, each consumer appliance having a standard dedicated remote control device with a corresponding key pad layout, the universal programmable

remote control device comprising:

a touch screen display;

an infra-red (IR) or radio-frequency (RF) transmitter;

a memory;

an interface;

a processor programmed to:

receive an input indicative of a consumer appliance to be controlled,

control the interface to go via the internet to a website and retrieve (1) infra-red (IR) or radio-frequency (RF) control codes as data in an extensible mark-up language (XML) format for the consumer appliance to be controlled and (2) a description as data in an XML format of a key pad layout corresponding to the standard dedicated remote control device for the consumer appliance to be controlled;

convert the retrieved IR or RF control codes and key pad layout description via an XML application into commands for installation and local processing on the universal programmable remote control device and store the retrieved converted IR or RF control codes and the key pad layout description in the memory;

control the touch screen display via a corresponding stored key pad layout command to display icons depicting the key pad layout corresponding to the standard dedicated remote control device for the consumer appliance to be controlled, and

in response to one of the icons displayed on the ~~control~~ touch screen display being touched, controlling the IR or RF transmitter to transmit a corresponding stored IR or RF control code command represented by the touched icons,

wherein by the universal programmable remote control device emulates the standard dedicated remote ~~controls~~ control device for a corresponding one or more controlled consumer appliances.